A Higher Risk of Acute Rejection of Human Kidney Allografts Can Be Predicted from the Level of CD45RC Expressed by the Recipients' CD8 T Cells

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Résumé en anglais	Although transplantation is the common treatment for end-stage renal failure, allograft rejection and marked morbidity from the use of immunosuppressive drugs remain important limitations. A major challenge in the field is to identify easy, reliable and noninvasive biomarkers allowing the prediction of deleterious alloreactive immune responses and the tailoring of immunosuppressive therapy in individuals according to the rejection risk. In this study, we first established that the expression of the RC isoform of the CD45 molecule (CD45RC) on CD4 and CD8 T cells from healthy individuals identifies functionally distinct alloreactive T cell subsets that behave differently in terms of proliferation and cytokine secretion. We then investigated whether the frequency of the recipients CD45RC T cell subsets before transplantation would predict acute graft rejection in a cohort of 89 patients who had undergone their first kidney transplantation. We showed that patients exhibiting more than 54.7% of CD8 CD45RChigh T cells before transplantation had a 6 fold increased risk of acute kidney graft rejection. In contrast, the proportions of CD4 CD45RC T cells were not predictive. Thus, a higher risk of acute rejection of human kidney allografts can be predicted from the level of CD45RC expressed by the recipients' CD8 T cells.
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